

User's manual

(short form)

NVIP-2DN3001H/IR-2P

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<http://www.e-camere.ro/camere-supraveghere-ip/Novus/NVIP-2DN3001H-IRH-2>

NOVus[®]

IMPORTANT SAFEGUARDS AND WARNINGS

EMC (2004/108/EC) and LVD (2006/95/EC) Directives



Our products are manufactured to comply with requirements of the following directives and national regulations implementing the directives:

- Electromagnetic compatibility EMC 2004/108/EC.
- Low voltage LVD 2006/95/EC with further amendment. The Directive applies to electrical equipment designed for use with a voltage rating of between 50VAC and 1000VAC as well as 75VDC and 1500VDC.

WEEE Directive 2002/96/EC



Information on Disposal for Users of Waste Electrical and Electronic Equipment

This appliance is marked according to the European 1000VAC Directive on Waste Electrical and Electronic Equipment (2002/96/EC) and further amendments. By ensuring this product is disposed of correctly, you will help to prevent potential negative consequences for the environment and human health, which could otherwise be caused by inappropriate waste handling of this product.

The symbol on the product, or the documents accompanying the product, indicates that this appliance may not be treated as household waste. It shall be handed over to the applicable collection point for used up electrical and electronic equipment for recycling purpose. For more information about recycling of this product, please contact your local authorities, your household waste disposal service or the shop where you purchased the product.

RoHS Directive 2002/95/EC



Out of concern for human health protection and friendly environment, we assure that our products falling under RoHS Directive regulations, regarding the restriction of the use of hazardous substances in electrical and electronic equipment, have been designed and manufactured in compliance with the above mentioned regulations. Simultaneously, we claim that our products have been tested and do not contain hazardous substances whose exceeding limits could have negative impact on human health or natural environment

Information

The device, as a part of professional CCTV system used for surveillance and control, is not designed for self installation in households by individuals without technical knowledge.

Excluding of responsibility in case of damaging data on a disk or other devices:

The manufacturer does not bear any responsibility in case of damaging or losing data on a disk or other devices during device operation.

WARNING!

PRIOR TO UNDERTAKING ANY ACTION THAT IS NOT DESCRIBED FOR THE GIVEN PRODUCT IN USER'S MANUAL AND OTHER DOCUMENTS DELIVERED WITH THE PRODUCT, OR IF IT DOES NOT ARISE FROM THE USUAL APPLICATION OF THE PRODUCT, MANUFACTURER MUST BE CONTACTED UNDER THE RIGOR OF EXCLUDING THE MANUFACTURER'S RESPONSIBILITY FOR THE RESULTS OF SUCH AN ACTION.

IMPORTANT SAFEGUARDS AND WARNINGS

WARNING!

THE KNOWLEDGE OF THIS MANUAL IS AN INDESPENSIBLE CONDITION OF A PROPER DEVICE OPERATION. YOU ARE KINDLY REQUESTED TO FAMILIRIZE YOURSELF WITH THE MANUAL PRIOR TO INSTALLATION AND FURTHER DEVICE OPERATION.

WARNING!

USER IS NOT ALLOWED TO DISASSEMBLE THE CASING AS THERE ARE NO USER -SERVICEABLE PARTS INSIDE THIS UNIT. ONLY AUTHORIZED SERVICE PERSONNEL MAY OPEN THE UNIT

INSTALLATION AND SERVICING SHOULD ONLY BE DONE BY QUALIFIED SERVICE PERSONNEL AND SHOULD CONFORM TO ALL LOCAL REGULATIONS

1. Prior to undertaking any action please consult the following manual and read all the safety and operating instructions before starting the device.
2. Please keep this manual for the lifespan of the device in case referring to the contents of this manual is necessary;
3. All the safety precautions referred to in this manual should be strictly followed, as they have a direct influence on user's safety and durability and reliability of the device;
4. All actions conducted by the servicemen and users must be accomplished in accordance with the user's manual;
5. The device should be disconnected from power sources during maintenance procedures;
6. Usage of additional devices and components neither provided nor recommended by the producer is forbidden;
7. You are not allowed to use the camera in high humidity environment (i.e. close to swimming pools, bath tubs, damp basements);
8. Mounting the device in places where proper ventilation cannot be provided (e. g. closed lockers etc.) is not recommended since it may lead to heat build-up and damaging the device itself as a consequence;
9. Mounting the camera on unstable surface or using not recommended mounts is forbidden. Improperly mounted camera may cause a fatal accident or may be seriously damaged itself. The camera must be mounted by qualified personnel with proper authorization, in accordance with this user's manual.
10. Device should be supplied only from a power sources whose parameters are in accordance with those specified by the producer in the camera technical datasheet. Therefore, it is forbidden to supply the camera from a power sources with unknown parameters, unstable or not meeting producer's requirements;

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<http://www.e-camere.ro/camere-supraveghere-ip/Novus/NVIP-2DN3001H-IRH-2>

FOREWORD INFORMATION

1. FOREWORD INFORMATION

1.1. General Characteristics

- Imager resolution: 2.0 megapixels 16:9 ratio (FullHD)
- Mechanical IR cut filter ,IR operation capability
- Min. Illumination from 0 lx with IR LED on
- Wide Dynamic Range (WDR) for enhanced image quality in diverse light conditions
- Digital Slow Shutter (DSS)
- Digital Noise Reduction (DNR)
- Aspherical lens with auto D-type iris f=3~9 mm
- Built-in 23 LED illuminator
- Privacy zones: 5
- Alarm input and outputs
- Compression: H.264, M-JPEG
- Max video processing resolution: 1920x1080
- Dual streaming: compression, resolution, speed and quality defined individually for each video stream
- RTP/RTSP protocol support for video transmission
- Pre & post-alarm functions
- Hardware motion detection
- Built-in webserver: camera configuration through the website
- MicroSD/SDHC card support
- Wide range of responses to alarm events: e-mail with attachment, saving file on FTP server, triggering alarm output, saving file on SD/SDHC card, HTTP notification
- Network protocol support : HTTP, TCP/IP, IPv4/v6, UDP, HTTPS, Multicast, FTP, DHCP, DDNS, NTP, RTSP, RTP, UPnP, SNMP, QoS,
- Software: NMS (NOVUS MANAGEMENT SYSTEM) for video recording, live monitoring, playback and remote IP devices administration
- Power supply: 12VDC, 24VAC, PoE (Power over Ethernet)

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FOREWORD INFORMATION

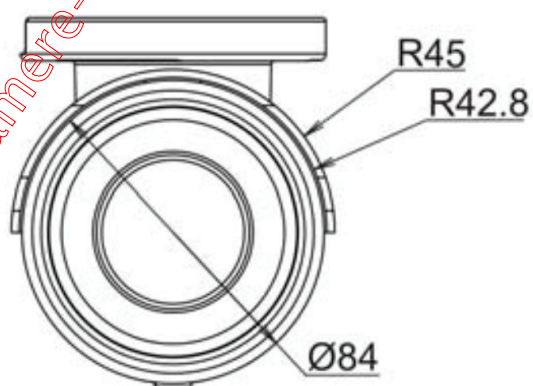
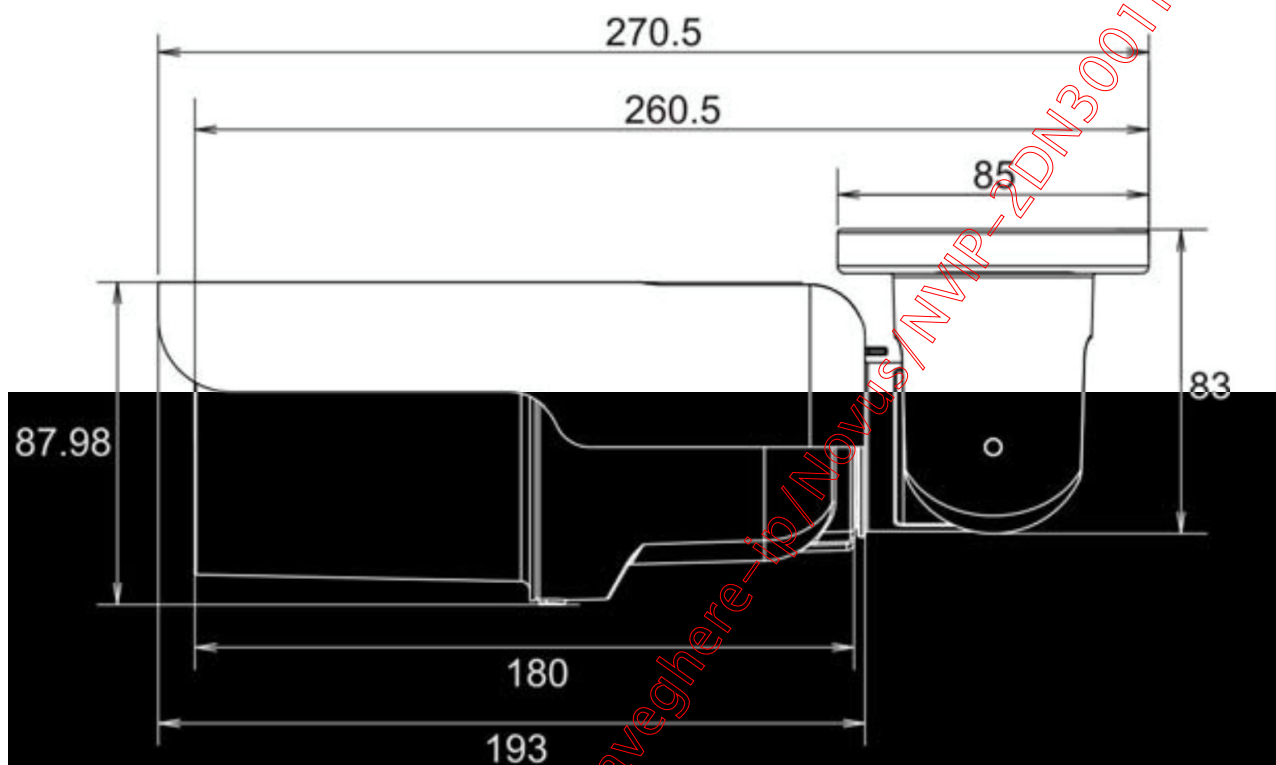
1.2. NVIP-2DN3001H/IR-2P specification

Model	NVIP-2DN3001H/IR-2P
Pick-up Element	1/2.7" (16:9) Progressive Scan CMOS
Imager Resolution	2 megapixels
Min. Illumination	Color: 0.2 lx / F 1.2 B/W: 0.02 lx / F 1.2 IR: 0 lx
S/N Ratio	> 50 dB (AGC Off)
Electronic Shutter	Auto / Manual (1/1.5 ~ 1/10 000 s)
Digital Slow Shutter (DSS)	1/25 s ~ 1 s
Wide Dynamic Range (WDR)	Lo /Mid /Hi / Off
White Balance	Auto / ATW / Manual (RGB)
Back Light Compensation (BLC)	On /Off
Synchronization	Internal
Day/Night Switching	Auto/Manual/Light Sensor
Lens type	Aspherical auto iris DC, F=3 ~ 9 mm (F1.2)
Angle of View (H)	104° ~ 35 °
Image function	DNR – digital noise reduction,
Resolution	1920 x 1080, 1280 x 1024, 1280 x 720, 1024 x 768, 800 x 600, 720x576, 640 x 480, 352x288
Frame Rate	Up to 25 fps for resolution 1920 x 1080 and lower
Multi Streaming	2 streams
Video Compression	H.264/M-JPEG
Audio Compression	G.711 / G.726
Motion Detection	Hardware
System reaction to alarm event	E-mail with attachment, saving file on FTP, saving file to SD card, alarm output activation, HTTP notification
Pre/Post Alarm	Pre-alarm: up to 20 frame of picture or 3sec Post-alarm: up to 20 frame of picture or 9999sec
Video Saving Files	AVI(SD card), JPEG(FTP)
Simultaneous connection	10
Time Synchronization	Automatic time synchronization with NTP server
Network Protocols Support	HTTP, TCP/IP, IPv4/v6, UDP, HTTPS, Multicast, FTP, DHCP, DDNS, NTP, RTSP, RTP, UPnP, SNMP, QoS,
Software	NMS
Security	Password protected camera access and its configuration, HTTPS, IP filtering, IEEE 802.1X
Privacy Zones	5
Audio Input	1 x Jack (3,5mm)
Audio Output	1 x Jack (3,5mm)
Alarm Input	1, (NO/NC)
Alarm Output	1, electronic relay galvanically isolated, 0.1A, 30V AC/DC
External Ports	1 x Ethernet RJ-45, 10/100 Mbit/s, 1x microSD/SDHC
IR LED	23 pcs
IR effective range	30m
Degree of protection	IP 66
Power Supply	12V DC/ 24VAC/ PoE(IEEE 802.3af)
Power Consumption	5W/ 8W with IR
Operating Temperature	-10°C ~ 50°C
Dimensions (mm)	ø 88mm x 270mm (h)
Weight	1 kg

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FOREWORD INFORMATION

1.3. Camera dimensions



FOREWORD INFORMATION

1.4. Package contents

After you open the package make sure that the following elements are inside:

- IP camera
- Accessories bag
- Short version of user's manual
- CD containing manual and software

If any of this elements has been damaged during transport, pack all the elements back into the original box and contact your supplier for further assistance.

CAUTION!

If the device was brought from a location with lower temperature, please wait until it reaches the temperature of location it is currently in. Turning the device on immediately after bringing it from a location with lower ambient temperature is forbidden, as the condensing water vapour may cause short-circuits and damage the device as a result.

Before starting the device familiarize yourself with the description and the role of particular inputs, outputs and adjusting elements that the device is equipped with.

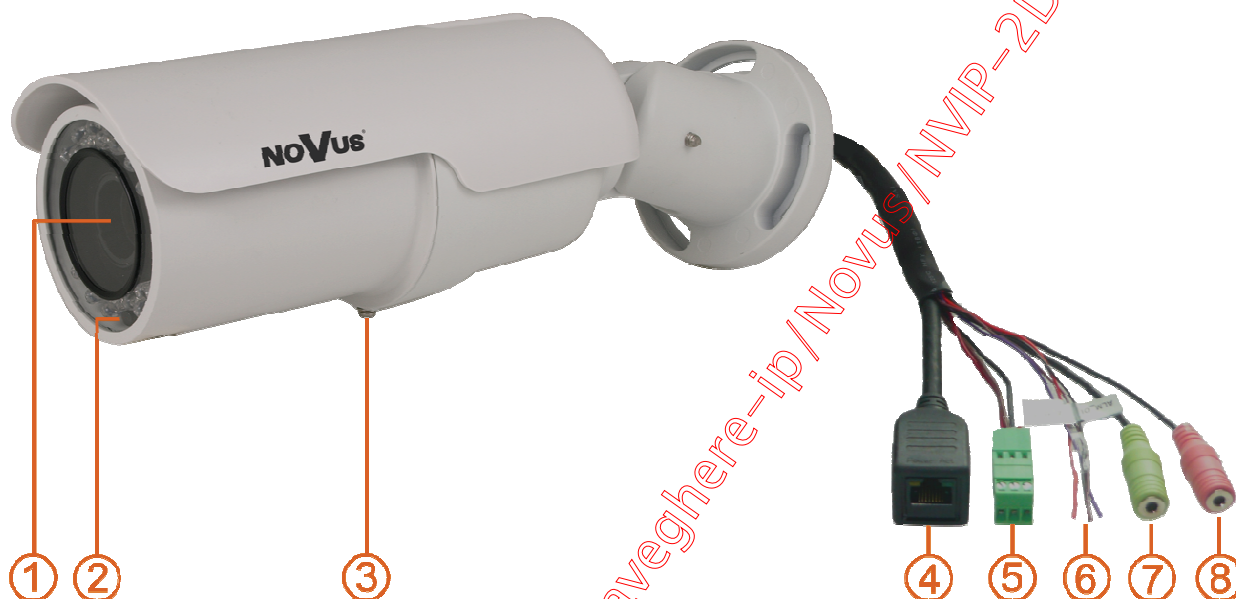
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START-UP AND INITIAL CAMERA CONFIGURATION


2. START-UP AND INITIAL IP CAMERA CONFIGURATION

2.1. Description of connectors and control tools

NVIP-2DN3001H/IR-2P



1. Lens
2. Light Sensor
3. Mounting screw
4. Port Ethernet 100 Mb/s (RJ-45 connector)
5. Power socket
6. Alarm input/output
7. Audio output
8. Audio input

Power socket	12VDC	24VAC
+	+ 12V	24V(+)
	Not connected	Earth ground
-	- (GND)	24V(-)

START-UP AND INITIAL CAMERA CONFIGURATION

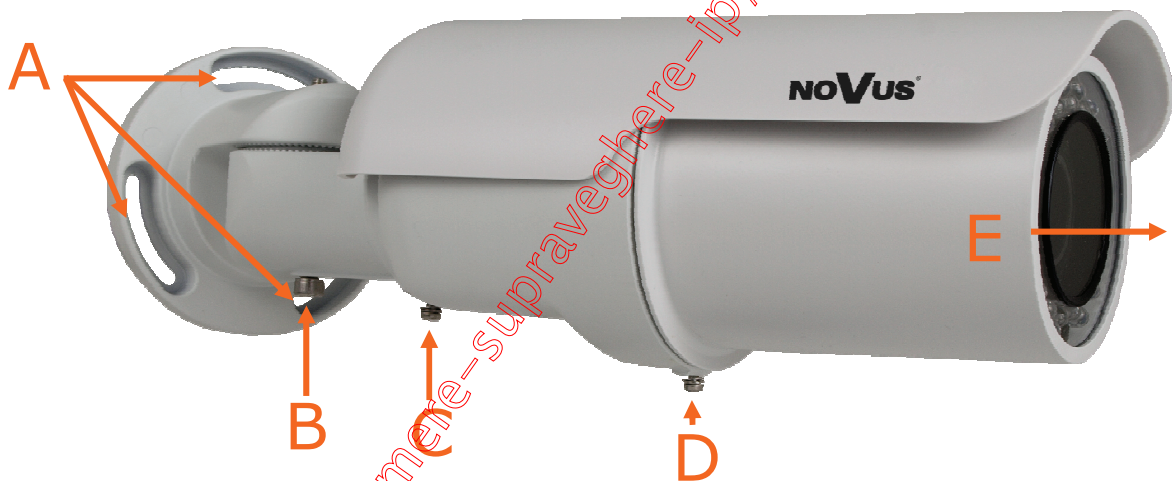
2.2. NVIP-2DN3001H/IR-2P mounting

To mount a camera please follow the instructions below:

- Put the bracket to the wall in a desired mounting place (with cable hole). Taking the bracket's base screw holes as a pattern, mark future drilling holes for screws using a punch.
- Drill holes in accordance with previously done markings and base hole placement.
- Mount the camera with bracket on the ceiling/wall with three supplied self tapping screws ("A" screw).
- Adjust camera position loosening the horizontal adjustment screw ("B" screws).
- Adjust camera rotation loosening the adjustment screw ("C" screws).

NOTE:

Please note that the wall or ceiling must have enough strength to support the IP Camera.



Lens Adjustment

- Unscrew the screw "D" on the Camera Housing
- Remove "E" the Front Housing in the direction pointed by arrow.
- Adjust Zoom and Focus loosening the zoom/focus blocking screw.
- Put front housing on to camera.
- Block the "D" screw.

NOTE:

In order to obtain declared degree of protection please seal the camera bracket to prevent water getting inside. Furthermore, when installing the bracket on rough/uneven surfaces, please additionally seal the junction with appropriate sealing mass. Please pay special attention to any mounting holes and if they are a loop-through ones, seal them too.

START-UP AND INITIAL CAMERA CONFIGURATION

2.4. Starting the IP camera

To run NOVUS IP camera you have to connect ethernet cable between camera and network switch with PoE support (IEEE 802.3af).

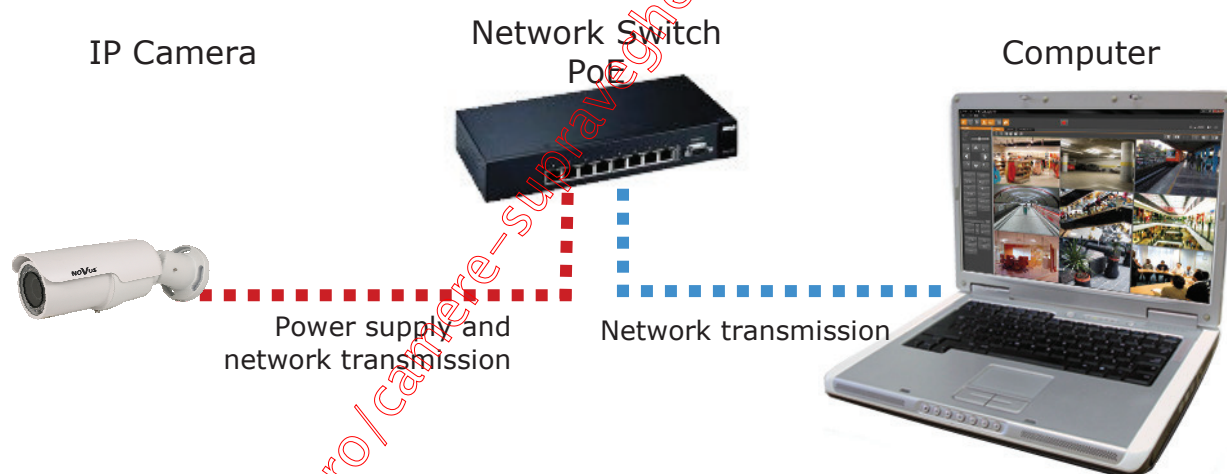
You can also connect it directly via power supply adapter with parameters compatible with camera power supply specification.

After connecting power supply green LED should light on. Initialization process is then started which takes about 30 seconds. You can then proceed to connect to the camera via web browser.

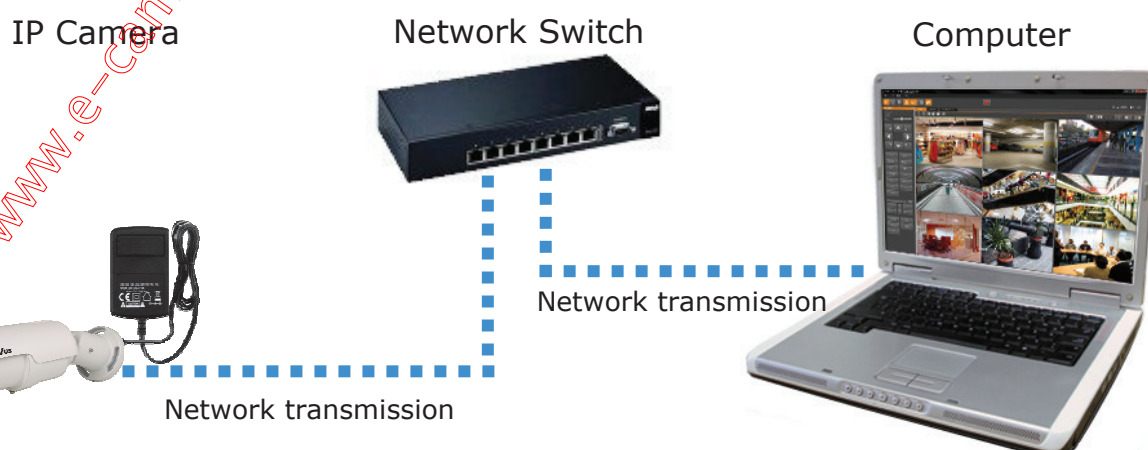
If the connection is successfully established orange LED blinks with a frequency proportional to the quantity of data sent. Connecting via web browser is then possible. If connection isn't established (the network cable is disconnected) green and orange LEDs aren't active, solid light means that network connection is ok but camera doesn't receive or send any data, with possible PC network settings error.

The recommended way to start an IP camera and perform its configuration is a connection directly to the network switch which is not connected to other devices. To obtain further information about network configuration parameters (IP address, gateway, network mask, etc.) please contact your network administrator.

- Connection utilising network switch with PoE support

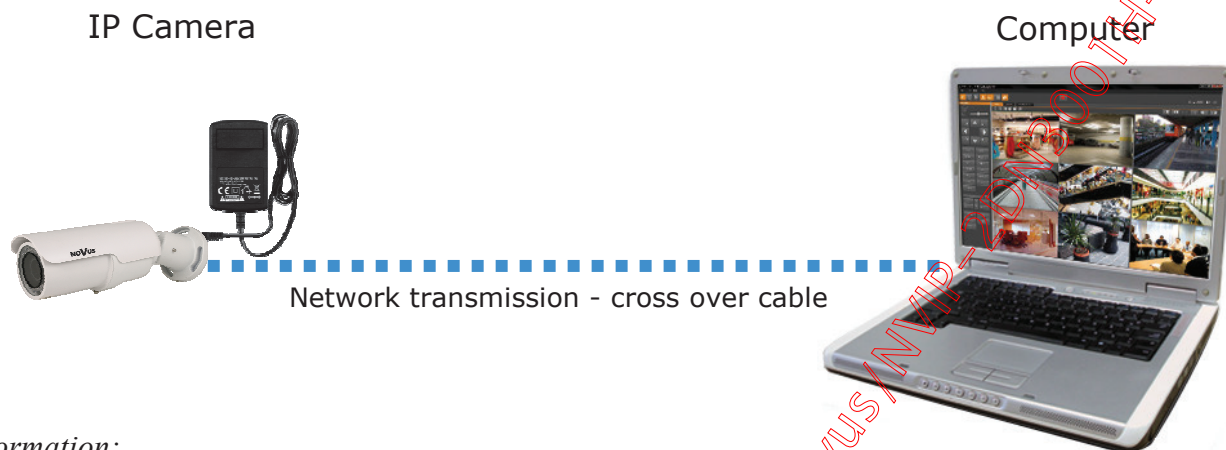


- Connection utilising external power supply and network switch



START-UP AND INITIAL CAMERA CONFIGURATION

- Connection utilising external power supply directly to the computer



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Information:

Power supply adapter is not included. Please use power adapter with parameters specified in user 'smanual.

Caution:

In order to provide protection against voltage surges/lightning strikes, usage of appropriate surge protectors (e.g. NVS-110E/P) is advised. Any damages resulting from surges are not eligible for service repairs.

2.5. Initial configuration via the web browser

The default network settings for NVIP-2... IP camera series are :

1. IP address= **192.168.1.200**
2. Network mask - **255.255.255.0**
3. Gateway - **192.168.1.1**
4. User name - **root**
5. Password - **pass**

Knowing the camera's IP address you need to appropriately set PC IP address, so the two devices can operate in one network subnet (e.g. for IP 192.168.1.1, appropriate address for the camera ranges from 192.168.1.2 to 192.168.1.254, for example 192.168.1.60). It is not allowed to set the same addresses for camera and PC computer

You can either set a network configuration (IP address, gateway, net mask, etc.) of NOVUS IP camera yourself or select DHCP mode (DHCP server is required in this method in target network) by using web browser or by NMS software. When you use DHCP server check IP address lease and its linking with camera MAC address to avoid changing or losing IP address during device operation or network/DHCP server breakdown. You have to remember to use a new camera IP address after changing network parameters.

After network setting configuration has been done, the camera can be connected to a target network.

NETWORK CONNECTION UTILIZING WEB BROWSER

3. NETWORK CONNECTION UTILIZING WEB BROWSER

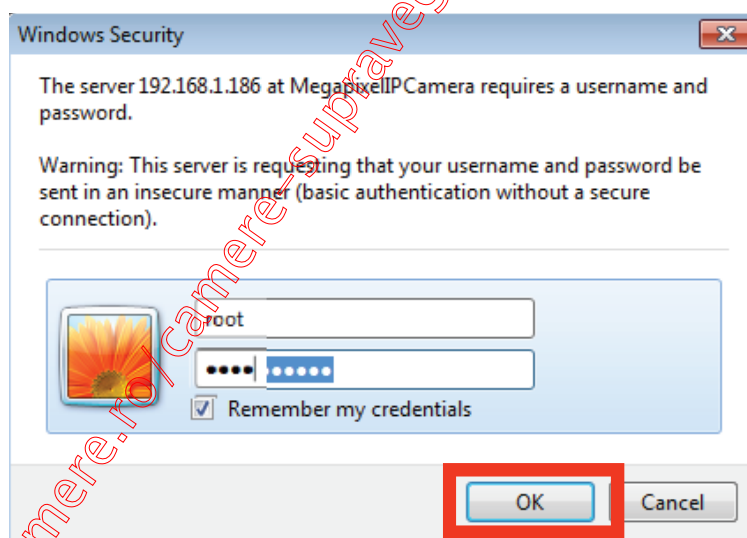
3.1. Recommended PC specification for web browser connections

Requirements below apply to connection with an IP camera, assuming smooth image display in 1920x1080 resolution and 25 fps speed.

1. CPU **Intel Pentium IV 3 GHz** or newer
2. **RAM** Memory min. **512 MB**
3. VGA card (any displaying **Direct 3D** with min. **128 MB RAM** memory)
4. OS **Windows XP / VISTA**
5. **Direct X** version **9.0** or newer
6. Network card **10/100/1000 Mb/s**

3.2. Connection with IP camera via the Internet Explorer

You have to enter camera IP address in the Internet Explorer address bar. If IP address is correct user login window will be displayed:

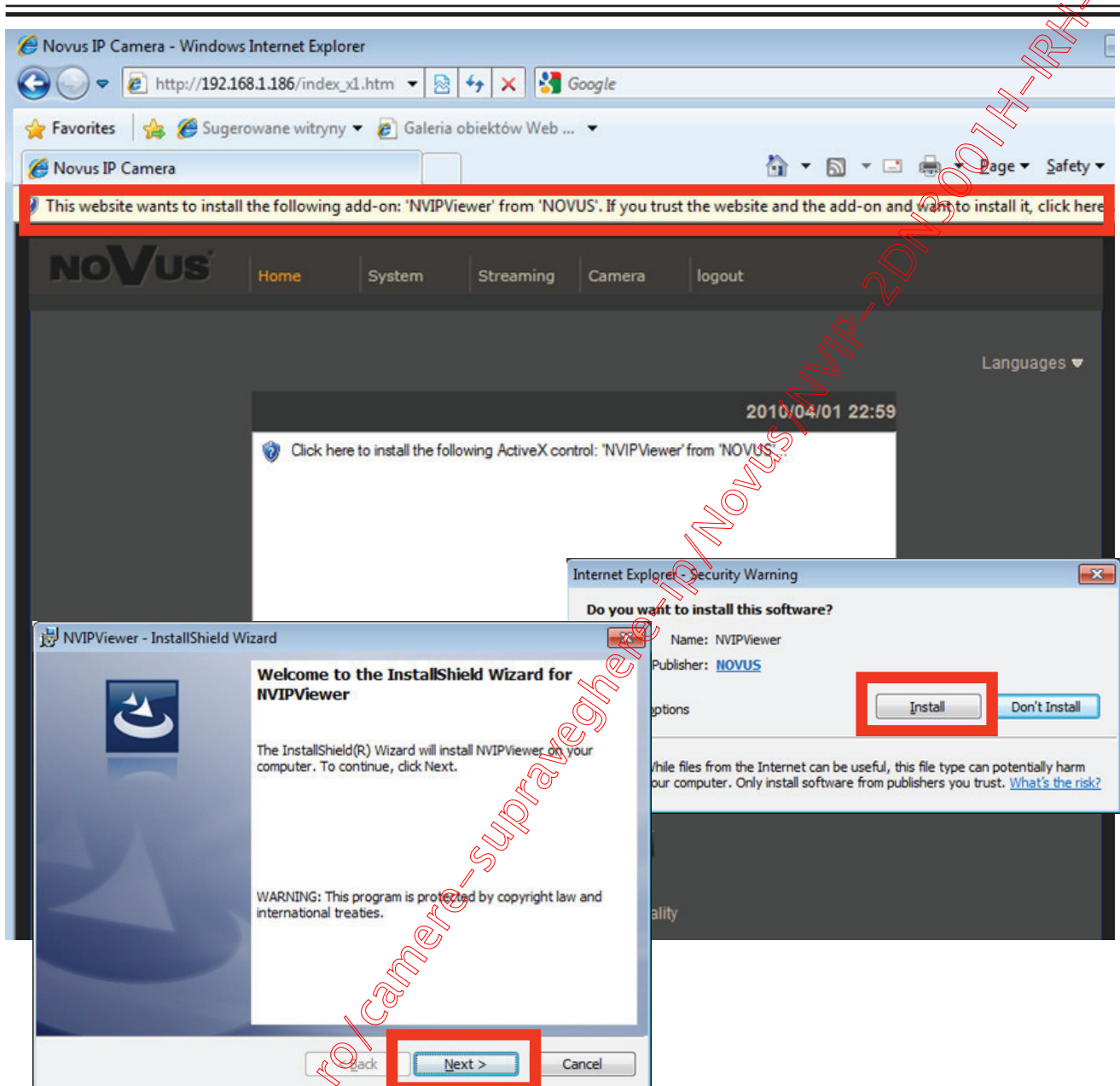


Default user is **root** and default password is **pass**.

For safety reasons, it is recommended to change default user name and password.

When you log on to the camera, web browser will download the applet for displaying images from the camera. Depending on the current Internet Explorer security settings it may be necessary to accept an ActiveX control. To do this, click the right mouse button on the message, select "Install Active X control", and then click Install. After successfully NVIP Viewer plug in downloading run and install it on a computer.

NETWORK CONNECTION UTILIZING WEB BROWSER



If the installation fails, changing security settings for the IE browser is required. In order to do that, please choose: *Tools > Internet options > Security tab > Custom level* and:

- Under *Download unsigned ActiveX controls* - select either Enable or Prompt
- Under *Initialize and script ActiveX controls not marked as safe* - select Enable or Prompt

You can also add the camera's IP address to "trusted zone" and set lowest security level for it.

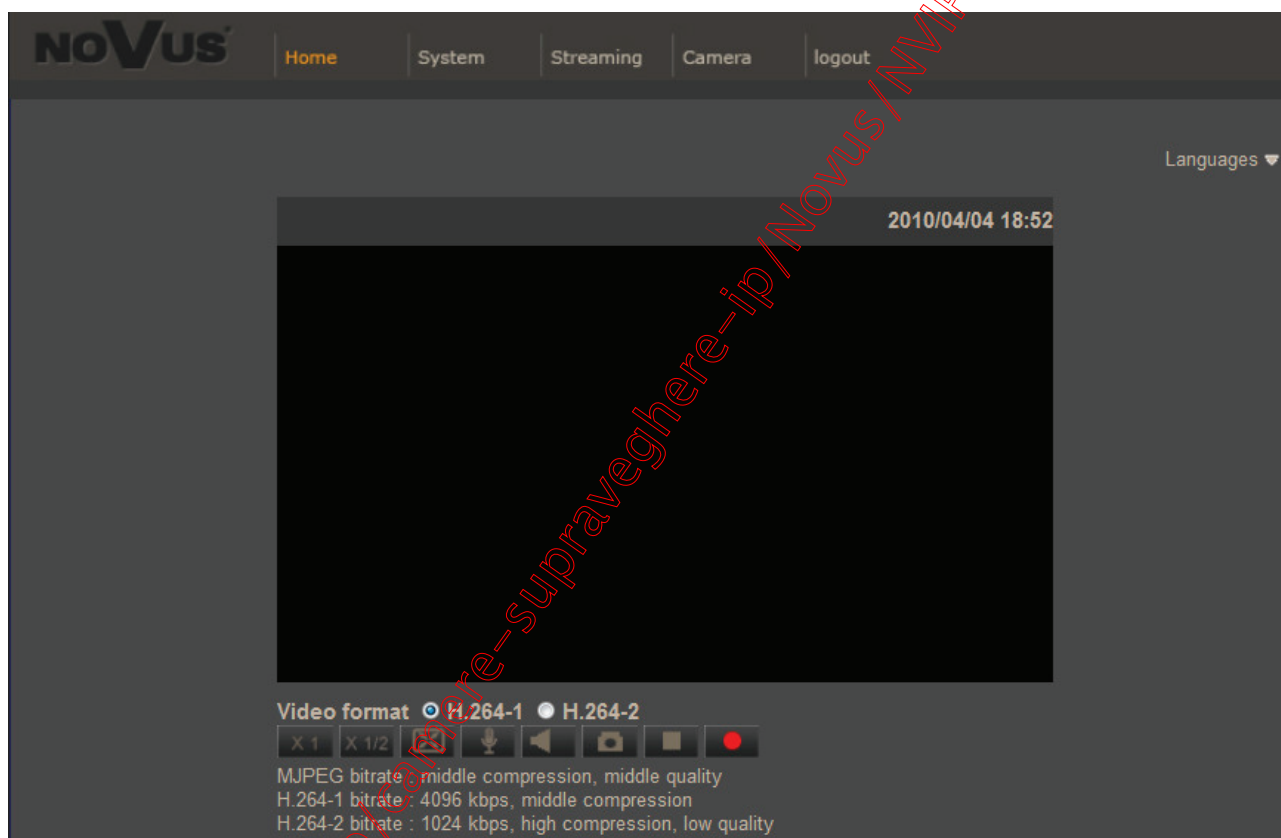
In addition, when working in Windows Vista/7 the ActiveX applet may be blocked by Windows Defender or User account control. In such case you should allow to run this applet, or simply disable

NETWORK CONNECTION UTILIZING WEB BROWSER

3.3. Connection with IP camera via other browser eg. Chrome, Mozilla Firefox, Safari)

It is also possible to connect to the camera using Mozilla Firefox, but this browser doesn't offer full functionality of the camera, so the recommended browser is Internet Explorer.

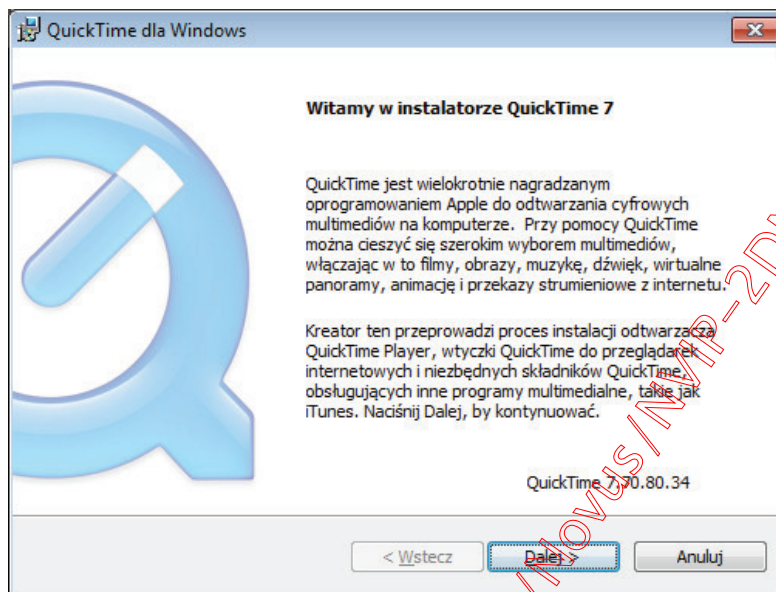
The first run of the IP camera in browser is very similar to the IE version. After you type the correct IP address you have to write correct username and password. The default user is **root** and password is **pass**.



Next, blank screen is displayed. Then you have to install the missing Quick Time plug-in from site:

<http://www.apple.com/quicktime/download/>

NETWORK CONNECTION UTILIZING WEB BROWSER



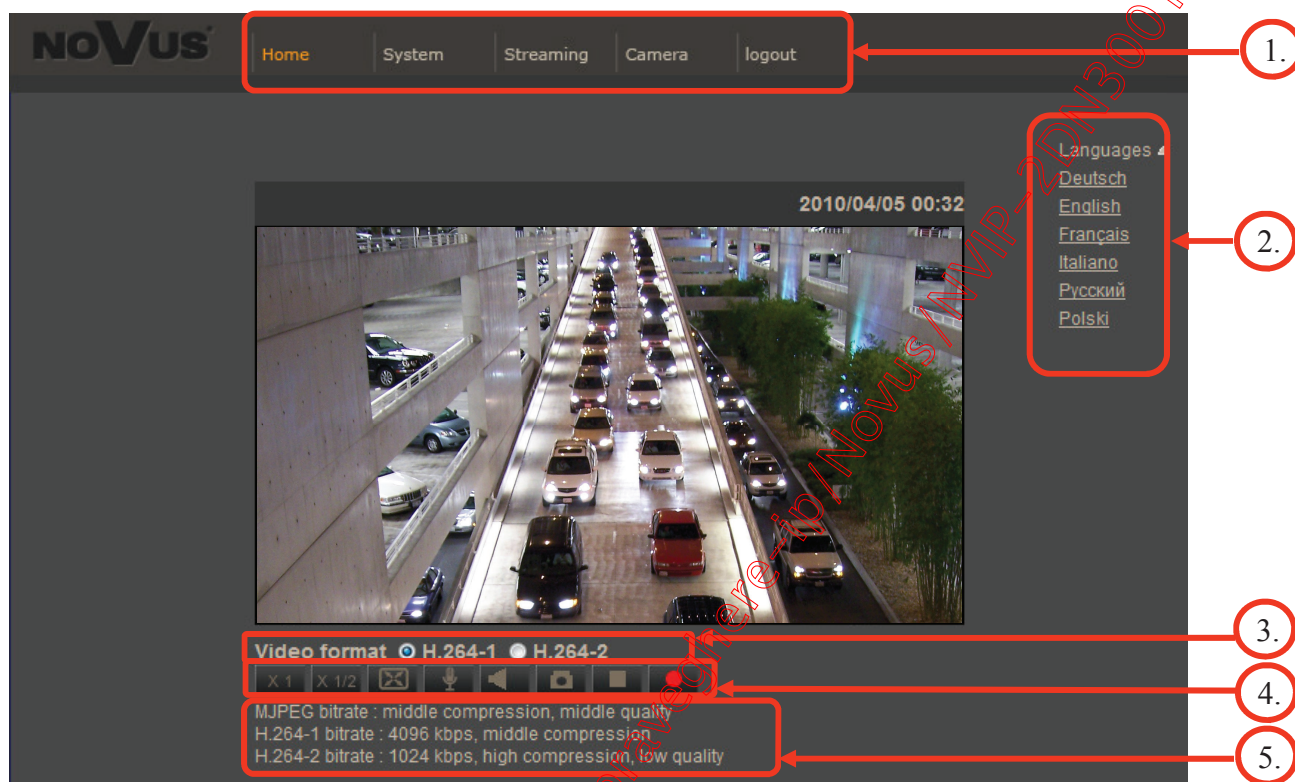
After downloading and running it, a window depicting installation of particular components is then displayed. After proper installation pictures from the camera should become visible



WWW INTERFACE - WORKING WITH IP CAMERA

4. WWW INTERFACE - WORKING WITH IP CAMERA

4.1. Displaying live pictures



1. Main tabs

Home — live view page

System — camera settings (IP recording, sending alarm messages, motion detection)

Streaming — streaming settings for audio and video audio

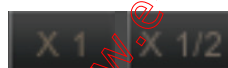
Camera — picture settings

Logout

2. Language selection.

3. Video stream selection.

4. ActiveX settings for live video.



- Display mode in web browser



- Full screen view



- Microphone - enable audio from microphone



- Speaker - enable audio sending to the camera

WWW INTERFACE - WORKING WITH IP CAMERA



- Snapshot - saves the current frame in JPEG format



- Video Streaming pause/play button

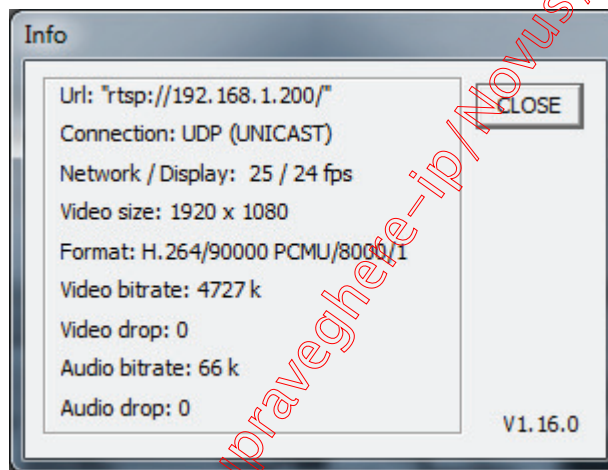


- Web recording to AVI button

5. Video streaming information.

Right mouse button click on the live screen view displays additional information about actual video and audio transition parameters.

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ELECTRIC CONNECTORS AND ACCESORIES

5. ELECTRIC CONNECTORS AND ACCESORIES

5.1. Connecting power supply to the camera.

The camera is supplied by using RJ45 network socket. To run NOVUS IP camera you have to connect ethernet cable between camera and network switch with PoE support (IEEE 802.3af). You can also use a power injector compatible with IEEE 802.3af standard.

Information:

Power supply adapter is not included. Please use power adapter with parameters specified in user's manual.

Caution:

In order to provide protection against voltage surges/lightning strikes, usage of appropriate surge protectors (e.g. NVS-110E/P) is advised. Any damages resulting from surges are not eligible for service repairs.

5.2. Connecting alarm inputs/outputs.

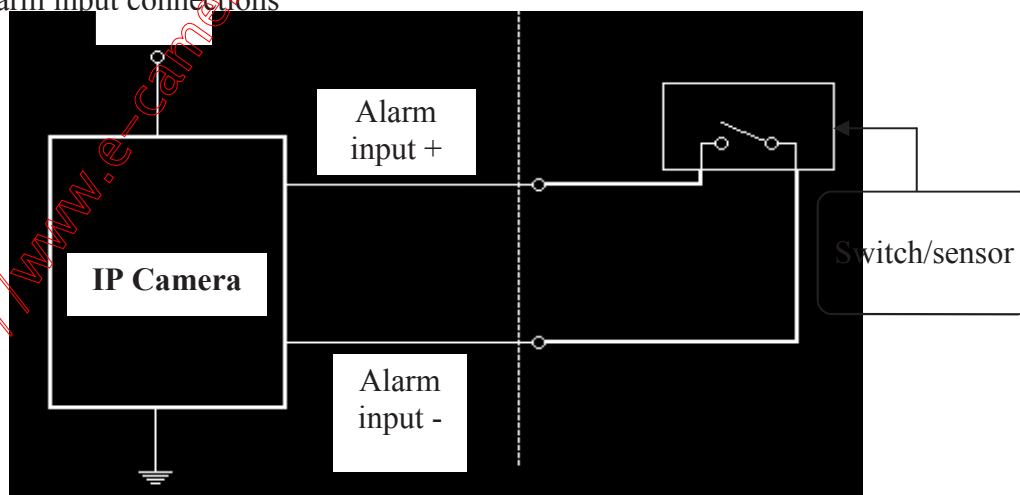
- Description of alarm input/output connector terminal is presented in the table below:

Cable	Description	Color
Alarm input +	ALM_IN +	GREEN
Alarm input -	ALM_IN -	BLUE
Alarm output +	ALM_OUT +	ORANGE
Alarm output -	ALM_OUT -	YELLOW

- Input and output connector states:

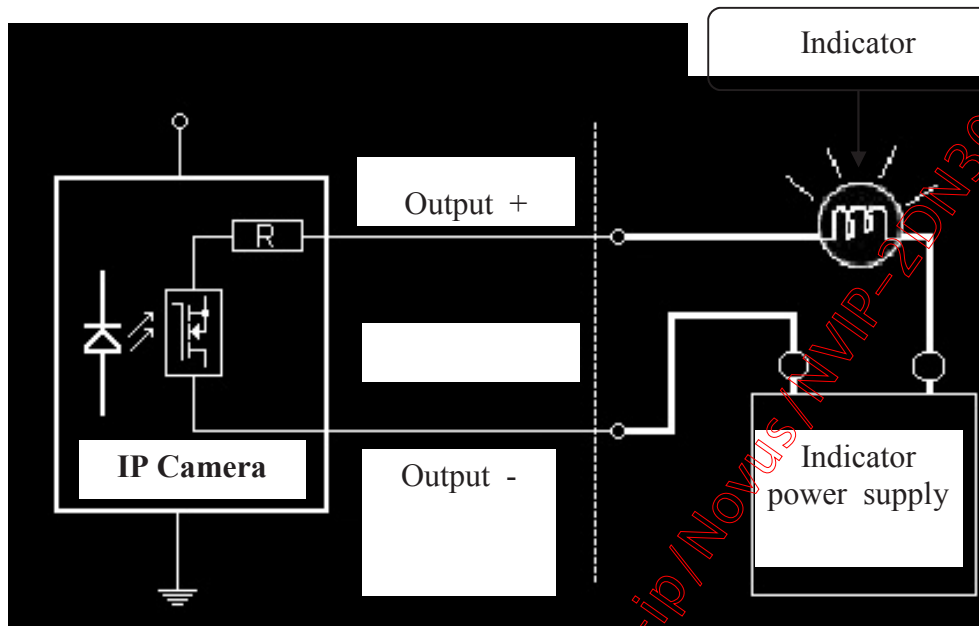
Alarm input	Normal state	5V	-
	Active state	0V	I<0,2mA
Alarm output	Normal state	No connected ($R=\infty$)	-
	Active state	Conected ($R=30\Omega$)	0.1A, 30VDC/AC

- Alarm input connections



ELECTRIC CONNECTORS AND ACCESORIES

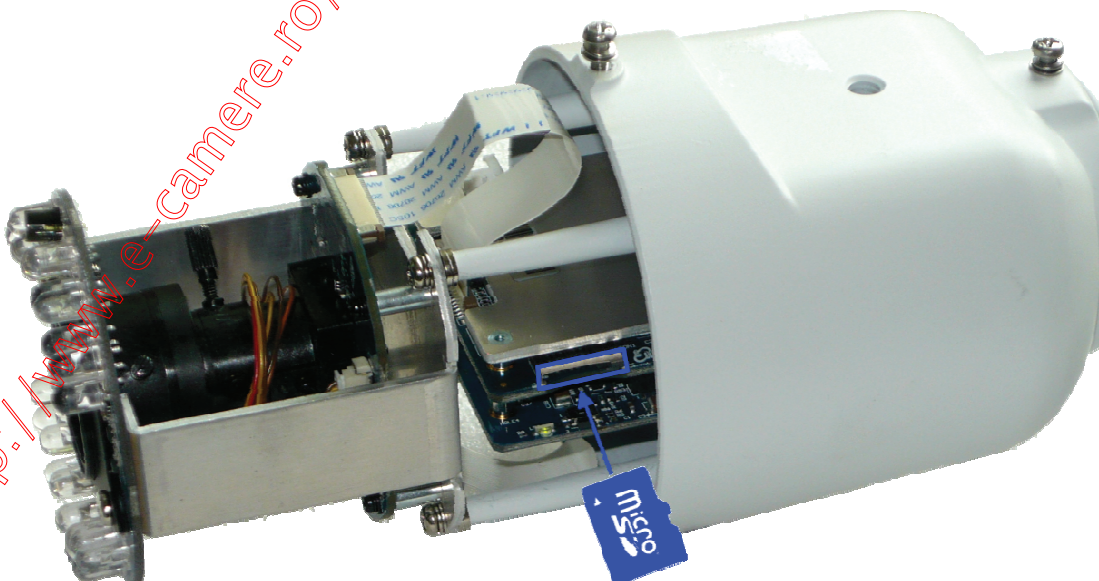
- Alarm output electric connections



5.3. SD card installation

Camera supports SD and SDHC cards with their capacity up to 16GB. In order to install the card properly, please follow the instructions below:

- Format the card in FAT32 file system using a PC computer
- Turn the camera off
- Mount SD card in the socket located at the camera's rear, according to the picture:
- Turn the camera on
- Check the SD card by checking its capacity in the *STORAGE MANAGEMENT* tab.



ELECTRIC CONNECTORS AND ACCESORIES

6. RESTORING FACTORY DEFAULTS

NOVUS IP cameras allow to restore defaults via:

- software (web browser level) resetting the camera settings
- hardware (using reset) restores factory defaults.

6.1. Restoring software factory defaults

Factory software default restores default settings of the IP camera except network settings. The camera re-starts then, taking about one minute to complete. Option to restore the factory default is described in *SETUP>FACTORY DEFAULT* tab.

6.2. Restoring hardware factory defaults in IP cameras

In order to restore factory defaults for the camera please follow the instructions:

- press the *RESET* button and hold on for 10 seconds
- release button
- log on after approx. 1 minute using default IP address (<http://192.168.1.200>) and default user name (root) and password (pass)

